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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,798

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Buddie Gordon Miller

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02/02/2009

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP  
1250 CONNECTICUT AVENUE, NW  
SUITE 700  
WASHINGTON, DC 20036

EXAMINER

VENNE, DANIEL V

ART UNIT

PAPER NUMBER

3617

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/565,798	<b>Applicant(s)</b> MILLER, BUDDIE GORDON	
	<b>Examiner</b> DANIEL V. VENNE	<b>Art Unit</b> 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 2,3 and 5-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3,5-9,11-16 and 19-26 is/are rejected.
- 7) ☒ Claim(s) 10,17 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/29/2008</u>  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Request for Continued Examination***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/29/2008 has been entered.
2. Claims 1 and 4 are canceled.
3. Claims 2, 3, 5-8, 12, 13, 15, 17-21 and 23 are amended.
4. Claims 25 and 26 are new.

### ***Specification***

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Amended claims 2, 3, 5, 6, 8, 12, 13, 15, 19-21, 23, 24 and 26 recite "single hull unit" which is not indicated, described, explained or defined in the specification. Similarly, claim 17 recites "two hull units" and "one hull unit". The term "hull unit" is not indicated, described, explained or defined in the specification.

### ***Claim Objections***

6. Claim 16 is objected to because of the following informalities: Claim 16 recites "said transverse slot" which should be -- said slot -- for proper consistency and clarity. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 2, 3, 5, 7, 11, 12, 15 and 22-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Poole (US 3514962). Poole discloses a boat (barge) comprising a hull [10] with two hull portions on each side of a slot (recess) [15], which with the two portions together can be considered a single hull unit [10] (as so broadly claimed since applicant has not defined the term “single hull unit” or “hull unit” in either the claims or in the specification), the slot (recess) [15] is elongated and substantially vertical, and extends substantially therethrough the hull such that the slot divides the single hull unit into at least two substantially separate buoyant compartments (see Fig. 3). Water, on which the boat is floating, freely communicates with the slot and with air within and surrounding the slot (barge is towed and submerged, see col. 4, lines 18-20, such that the slot [15] freely communicates with water and air during initial submergence from the water surface. With the barge partially submerged, the slot [15] extends upwardly to a location above the waterline of the boat, such that the slot [15] is simultaneously above and below the waterline. The single hull unit has a single bow portion (which can be considered the forward section of the bow shown in Figs. 1 and 2) which is substantially at a centerline of the single hull unit. The slot [15] has a cross sectional area such that a vertical dimension of the cross sectional area of the slot is substantially greater than a

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horizontal dimension of the cross sectional area of the slot (see Fig. 3). With respect to claim 3, the slot [15] extends longitudinally through a majority of the single hull unit [10]. With respect to claims 2, 5 and 7, the slot [15] is closed at the bow and bottom, fully open at the stern, and open at the top (see Figs. 1 and 2). With respect to claim 15, the slot [15] extends at least partially in a transverse direction through the single hull unit (hull) [10]. Regarding claim 22; in as much as the center buoyancy is the centroid of the underwater portion of a vessel or center of the underwater volume (Principles of Naval Architecture, Vol. I Stability and Strength, pp. 16-17, (c) 1988 SNAME), only one center of buoyancy is provided for any single immersed object; unless a slot completely separates a submerged object into more than one separate objects, only one center of buoyancy can exist for the object. However, if one considers that the center of buoyancy is the sum of all centers of buoyancy for each portion of a submerged hull, then it can be considered that Poole would inherently have a center of buoyancy for each symmetric port and starboard half of the hull on each side of the slot with a net center of buoyancy (or net centroid of underwater volume) being between the individual fractional centers of buoyancy for the two symmetric port and starboard halves.

Regarding claim 23, the boat (barge) is a vessel that can be fully submerged; therefore it can be considered a submarine vessel. The recitation in the preamble of the independent claims for the boat "having enhanced stability, safety and comfort" can be considered to be present in Poole, since the Poole hull design can be considered to have enhanced stability, safety and comfort in as much as these are not structural

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limitations and the hull design of Poole is improved for enhanced in stability, safety and comfort over at least a canoe or other lesser type of vessel.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2, 3, 5, 6, 9, 11-16, 22, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fletcher (US 3929644). Fletcher discloses a boat [10] comprising a hull [11] with two hull portions (or sections) [12a, 12b] which together can be considered a single hull unit (hull) [11] (as so broadly claimed since applicant has not defined the term "single hull unit" or "hull unit" in either the claims or in the specification), and having at least one elongated, substantially vertical slot (flow passage) [19] extending substantially therethrough such that the slot divides the single hull unit into at least two substantially separate buoyant compartments (see Fig. 2), such that water, on which the boat is floating, freely communicates with the slot [19]. Fletcher does not explicitly disclose that water, on which the boat is floating, also freely communicates with air within and surrounding the slot [19]. When scavenging oil or other floating debris from the surface of a body of water, the deck [20] is located with reference to the draft of the craft [10] so that it lies generally along the surface layer of a body of water in which the craft is located so that the upper surface of the deck is washed with such upper layer such that the surface layer of the body of water can flow over the deck [20]

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of the craft [10]; therefore, the waterline during oil scavenging operations is generally at the deck level (see col. 2, lines 59-66). The waterline of any marine vessel is a function of loading, buoyancy, speed and water surface conditions. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains to adjust loading, buoyancy and speed such that the waterline of the craft is just below the deck [20] or that an irregular water surface would also freely communicate with air within and surrounding the slot [19]; adjusting the waterline such that the water surface would be just below the deck of the craft would allow the craft to move more freely with less drag and water plane area (horizontal water surface area intersected by the hull of the boat) for maneuvering and transit when not engaged in oil scavenging operations. Such a waterline adjustment would save time and be more energy efficient (in fuel savings) when transiting to and from a work site and not accumulating oil and other debris. With such a waterline adjustment, with respect to claim 11, the slot [19] extends upwardly to a location above the waterline of the boat, such that the slot [19] is simultaneously above and below the waterline. The single hull unit has a single bow portion which can be considered the forward section of the bow (ramp or gate) [24] between the two downwardly projecting hull portions [12a, 12b] , and which is substantially at a centerline of the single hull unit (see Fig. 2). The slot [19] has a cross sectional area such that a vertical dimension of the cross sectional area of the slot is substantially greater than a horizontal dimension of the cross sectional area of the slot (see Fig. 2). With respect to claim 3, the slot [19] extends longitudinally through the single hull unit (between hull portions as shown in Fig. 2).

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With respect to claim 5, the slot [19] is more open at the bow than at the stern (see Fig. 2); hence, the slot is open at the bow and partly closed at the stern. With respect to claim 6, the slot is open on a bottom of the single hull unit (between hull portions as shown in Fig. 2). With respect to claim 9, either of the openings at the bow or the stern can be considered an air vent which communicates with the slot [19], since an air vent (as recited) can be considered any opening for which air can communicate with the slot [19]; additionally, openings [57] can be considered air vents when the tanks [17a, 17b] are empty of liquid. With respect to claims 15 and 16, the slot [19] extends at least partially in a transverse direction through the single hull unit (hull) [11] and is partly angled on each vertical side. Regarding claim 17, the two hull sections [12a, 12b] can be considered hull units and the hull can be considered a catamaran (see abstract and col. 5, line 10). Regarding claim 22; in as much as the center buoyancy is the centroid of the underwater portion of a vessel or center of the underwater volume (Principles of Naval Architecture, Vol. I Stability and Strength, pp. 16-17, (c) 1988 SNAME), only one center of buoyancy is provided for any single immersed object; unless a slot completely separates a submerged object into more than one separate objects, only one center of buoyancy can exist for the object. However, if one considers that the center of buoyancy is the sum of all centers of buoyancy for each portion of a submerged hull, then it can be considered that Fletcher would inherently have a center of buoyancy for each symmetric port and starboard half of the hull on each side of the slot with a net center of buoyancy (or net centroid of underwater volume) being between the individual fractional centers of buoyancy for the two symmetric port and starboard halves. The



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recitation in the preamble of the independent claims for the boat “having enhanced stability, safety and comfort” can be considered to be present in Fletcher, since the Fletcher hull design can be considered to have enhanced stability, safety and comfort in as much as these are not structural limitations and the hull design of Fletcher is improved for enhanced in stability, safety and comfort over at least a canoe or other lesser type of vessel.

11. Claims 2, 3, 6, 8, 11, 12, 15, 22, 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klose (US 3291088). Klose discloses a boat with a single hull unit (hull) [50] having at least one elongated vertical slot (daggerboard trunk) [64] along the boat centerline and extending through the hull, and at least partially in a transverse direction by virtue of the width of the slot. Water can freely communicate with the slot when the removable daggerboard [76] is not fitted in place within the slot. The slot extends longitudinally through the boat hull, although not through the entire hull length. Klose does not disclose that the slot divides the boat hull into at least two substantially buoyant compartments or extends substantially therethrough the single hull unit such that the slot divides the single hull unit into at least two substantially separate buoyant compartments; however, it would have been obvious to one of ordinary skill in the art to adjust the length of the slot as a matter of design choice depending on the length of daggerboard desired for the boat; a sufficiently long slot for such a daggerboard would be considered to divide the boat into two substantially buoyant compartments or extend approximately the length of the boat hull and would also be closed at the bow and at the stern. The rationale would have been to adjust the length of the slot depending on the

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length of the daggerboard desired for achieving the specific stability and performance characteristics desired for the boat hull. With the daggerboard removed, and a plug not in place, the slot would be open at a top and bottom and the opening at the top of the slot can be considered an air vent. In as much as the center buoyancy is the centroid of the underwater portion of a vessel or center of the underwater volume (Principles of Naval Architecture, Vol. I Stability and Strength, pp. 16-17, (c) 1988 SNAME), only one center of buoyancy is provided for any single immersed object; unless a slot completely separates a submerged object into more than one separate objects, only one center of buoyancy can exist for the object. However, if one considers that the center of buoyancy is the sum of all centers of buoyancy for each portion of a submerged hull, then it can be considered that Klose would inherently have a center of buoyancy for each symmetric port and starboard half of the hull on each side of the slot with a net center of buoyancy (or net centroid of underwater volume) being between the individual fractional centers of buoyancy for the two symmetric port and starboard halves. The recitation in the preamble of the independent claims for the boat "having enhanced stability, safety and comfort" can be considered to be present in Klose, since the Fletcher hull design can be considered to have enhanced stability, safety and comfort in as much as these are not structural limitations and the hull design of Klose is improved for enhanced in stability, safety and comfort over at least a canoe or other lesser type of vessel.

12. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fletcher (US 3929644), in view of Thiger et al. (US 6250240 B1). Fletcher discloses all

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claimed features as indicated above with the exception of the boat comprising a second slot, wherein the second slot extends longitudinally through the single hull unit or includes a plurality of elongated slots or 3 elongated slots, as recited. Thiger et al. in Fig. 8 shows a trimaran hull with three downwardly extending hull portions and two channels or slots, one between each hull portion. Thiger et al. in Fig. 7 shows four downwardly extending hull portions with three channels or slots, one between each hull portion. Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to which the subject matter pertains to provide a hull configuration as disclosed by Thiger et al. with Fletcher that would provide the recited second slot, plurality of slots or 3 slots as recited to create the invention as claimed by applicant. A trimaran hull or quadramaran (four hull) configuration instead of a catamaran hull would provide Fletcher additional venturi slots [19] that could assist in release of fluid from the tanks, as well as provide additional hull portions for increased waterplane area and lateral stability, and additional tanks in each hull portion for fluid storage. Such a hull design would provide the expected results of increased capacity and capability for oil scavenging by adding additional slots for increased the venturi flow capability for releasing fluids from the tanks of the boat, additional storage capacity for waste liquids that could be contained within additional tanks, as well as provide for enhanced lateral stability for the boat.

***Allowable Subject Matter***

13. Claims 10, 17 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

14. Applicant's arguments filed 12/29/2008 have been fully considered but they are not persuasive. Regarding applicant's arguments pertaining to the Fletcher reference, the slot is considered to extend through the single hull unit of Fletcher as indicated in the new rejection presented above. Additionally, applicant has not indicated, described, explained or defined "single hull unit" or "hull unit" in the claims or specification. The previous rejection based on Fletcher with regards to several features including the openings [57] discussed by applicant has been reconsidered in view of the amendments to the claims and the applicant's arguments, and the previous rejection based on Fletcher has been withdrawn. A new rejection based on Fletcher is as indicated above. In view of applicant's amendments to the claims, the previous rejection based on Norek has been withdrawn. With regards to applicant's arguments pertaining to the Klose reference, the daggerboard trunk can be considered a slot and the length of the slot can be considered a matter of design choice as indicated in the rejection above, a substantially long slot would essentially divide the hull into separate buoyant compartments as also indicated in the rejection above, the aft end of the thwart [58] is not limited to any distance behind the mast hole [62], therefore any distance aft of the mast hole [62] is available for extension of the daggerboard trunk (slot) [64]. The

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daggerboard is removable, therefore, the slot need not be filled with the daggerboard at all times and the slot is capable of being open with the daggerboard removed and the plug not in place, the plug is intended to be in place when the daggerboard is not fitted in the trunk, however, its function is to prevent loss of small articles down the trunk and splashing of water up through the trunk when the boat is operating at a high speed, the plug is not necessary for operation of the boat without the daggerboard, therefore the trunk (slot) could be left open. Should the daggerboard or plug not be in place and the slot left open, the daggerboard trunk (slot) is capable of freely communicating both air and water at the same time. Regarding applicant's remaining arguments with respect to claims 3, 7, 8 and 15, Klose is considered to disclose the features related to the extension and configuration of the daggerboard trunk as indicated in the rejection presented above, the examiner concurs with applicant that the Klose daggerboard is not closed on the bottom of the hull.

### ***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel V. Venne whose telephone number is (571) 272-7947. The examiner can normally be reached between 7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on (571) 272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/Daniel V Venne/  
Examiner, Art Unit 3617

1/30/2009